

United States Patent [19]

Kurihara et al.

[11] Patent Number: 5,051,402

[45] Date of Patent: Sep. 24, 1991

[54] PHARMACEUTICAL COMPOSITION
CONTAINING CYCLOSPORIN IN
ADMIXTURE WITH α -CYCLODEXTRIN

[75] Inventors: Kozo Kurihara; Masaru Murano,
both of Tokyo, Japan

[73] Assignee: Sankyo Company, Limited, Tokyo,
Japan

[21] Appl. No.: 587,580

[22] Filed: Sep. 21, 1990

Related U.S. Application Data

[63] Continuation of Ser. No. 201,579, Jun. 1, 1988, abandoned.

Foreign Application Priority Data

Jun. 4, 1987 [JP] Japan 62-140703

[51] Int. Cl.⁵ A61K 37/02

[52] U.S. Cl. 514/11; 514/9;
514/885

[58] Field of Search 514/11, 9, 58, 885,
514/970; 530/321, 317; 536/103

References Cited

U.S. PATENT DOCUMENTS

4,117,118 9/1978 Härrä et al. 530/321

4,388,307 6/1983 Cavanak 424/177

FOREIGN PATENT DOCUMENTS

895724 7/1983 Belgium .

94157 11/1983 European Pat. Off. .

0170623 2/1986 European Pat. Off. .

2015339 9/1979 United Kingdom .

OTHER PUBLICATIONS

Stadler-Szöke et al., Proceedings of the First Int. Symp. on Cyclodextrins, Szejtli (ed.), D. Reidel Publishing Co., Boston, U.S.A., pp. 377-388 (1981).

Merck Index, 10th Edition, 1983, p. 396, No. 2748.

Primary Examiner—John Doll

Assistant Examiner—Christina Chan

Attorney, Agent, or Firm—Frishauf, Holtz, Goodman & Woodward

[57]

ABSTRACT

Cyclosporins are useful immunosuppressive, anti-fungal and antiphlogistic agents which are relatively insoluble in water and aqueous fluids (including body fluids). They may be rendered more soluble by the concomitant administration of α -cyclodextrin, either separately, but essentially simultaneously or, preferably, in admixture.

33 Claims, No Drawings